N
7/26/99

ENTACT
environmental tactics in waste management

July 20, 1999

Mr. Ed Abat
U.S. Army Corps of Engineers
666 Dundee Rd.
Northbrook, IL 60062

Dear Mr. Abat:

In the table below is a summary of the results of the Interface Friction Testing, as called for in the ACOE Specifications. The Specifications dictate a minimum peak angle of 16.7 degrees for each soil-material and each material-material interface of the cap structure. As the table indicates, each of the tests yielded a passing result. The result of the GCL over Random Fill test is expected later today.

I would like to call your attention to the last two rows of the table below. These rows show results of tests run with the Select Fill soil over the Geogrid, and Select Fill soil over the Geocomposite Drainage Layer. As you can see, these peak angles were 35.5 degrees and 31.6 degrees, respectively. As is apparent from these tests, the Geocomposite Drainage Layer provides slope stability which greatly exceeds the minimum. Given that the sole purpose of the Geogrid is to provide slope stability, I feel that this layer is unnecessary, and I would like to eliminate it from the cap design.

Because we are scheduled to begin construction of the cap on Wednesday, July 21, we need to know as soon as possible if we will be required to install a Geogrid layer, so that the subcontractor has adequate time to order the material. Therefore, we would appreciate a response by Wednesday, July 21.

Summary of Interface Friction Testing

Interface top layer	**bottom layer**	**Peak Angle (degrees)**
GCL	Random Fill	(pending)
Geomembrane	GCL	40.0
Geocomposite	Geomembrane	30.0
Geogrid	Geocomposite	20.9
Select Fill	Geogrid	35.5
Select Fill	Geocomposite	31.6

Thank you very much for your consideration.

Most sincerely,

Dan Rest

Dan Rest, E.I.T.
ENTACT

Chicago Office
1360 North Wood Dale Road, Suite A • Wood Dale, IL 60191 • 630.616.2100 • Fax 630.616.9203
Chicago • Dallas • Indianapolis